

Response under 37 C.F.R. §1.111
Attorney Docket No. 030928
Serial No. 10/635,646

REMARKS

Claims 1-3 are pending in the application. Claim 1 is rejected. Claims 2 and 3 are withdrawn.

Claim Rejections - 35 U.S.C. §103

Claim 1 is rejected under 35 U.S.C. §103(a) as being unpatentable over TGK (JP 2002-168173A) in view of Ota et al. (U.S. Patent No. 6,234,763 B1). The Examiner asserts that TGK discloses the invention substantially as claimed.

The Examiner admits that TGK does not disclose a proportional flow rate control valve. The Examiner asserts that Ota et al. teach the use of a proportional flow rate control valve 51 in a variable displacement compressor 10 of an air conditioning system for the purpose of controlling the flow of refrigerant to the condenser 55, as noted in Fig. 1 and column 19, lines 54-56 of Ota et al. The Examiner concludes that it would have been obvious to modify the control valve of TKG in view of Ota et al., such that a proportional flow rate control valve could be provided in order to control the refrigerant to the condenser.

Applicants respectfully disagree with this rejection because there does not appear both the proportional flow rate control solenoid valve and a differential pressure valve as taught in a single reference, nor does there appear to be a suggestion to combine both cited references to reach the present invention.

Applicants note that claim 1 recites a combination of a flow rate control compressor and a normal charge-type expansion valve, wherein a control valve includes a proportional flow rate control solenoid valve and a differential pressure valve.

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The Examiner asserts that Ota et al. teach the use of a proportional flow rate control valve 51 in a variable displacement compressor 10 of an air conditioning system for the purpose of controlling the flow of refrigerant to the condenser 55, as noted in Fig. 1 and column 19, lines 54-56 of Ota et al. Applicants agree that the text indicates that valve 51 may be replaced with a proportional flow rate control valve.

However, as previously noted by Applicants, the control valve 60 in Ota et al. is configured such that a bellows 66 senses suction pressure P_s in a suction chamber 38, and then, depending on the value of P_s , the lift of a valve element 72 is controlled to control the flow rate of refrigerant supplied from the discharge chamber 39 to a crankcase 15, whereby the pressure P_c in the crankcase 15 of the variable displacement compressor is controlled such that the suction pressure P_s becomes equal to a predetermined value set by a solenoid valve 51. This means that the control valve 60 is not the constant differential pressure valve asserted to be by the Examiner. Therefore, there does not appear to both the proportional flow rate control solenoid valve and a differential pressure valve in Ota et al. alone.

Further, although TGK teaches a differential pressure valve, there does not appear any suggestion to combine the two references to reach the present invention. As Applicants have previously mentioned in detail, the known methods of controlling pressure and flow are provided for different purposes, and provide different advantages. Applicants note that the Examiner appears to be asserting that it would have been obvious to hold all parameters of Ota et al. constant, with the exception of providing a differential pressure valve, for the bare asserted reason “to control the refrigerant to the condenser”. Applicants note that this is not a properly stated suggestion to combine the references; rather, it is only a suggestion to have *any valve*

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controlling flow of refrigerant to a condenser. Therefore, Applicants respectfully submit that the rejection is improper and should be withdrawn.

In view of the aforementioned remarks, Applicants submit that that the claims are in condition for allowance. Applicants request such action at an early date.

If the Examiner believes that this application is not now in condition for allowance, the Examiner is requested to contact Applicants' undersigned attorney to arrange for an interview to expedite the disposition of this case.

If this paper is not timely filed, Applicants respectfully petition for an appropriate extension of time. The fees for such an extension or any other fees that may be due with respect to this paper may be charged to Deposit Account No. 50-2866.

Respectfully submitted,

WESTERMAN, HATTORI, DANIELS & ADRIAN, LLP



Kenneth H. Salen

Attorney for Applicants

Registration No. 43,077

Telephone: (202) 822-1100

Faxsimile: (202) 822-1111

KHS/lde